

CLAIMS

1. A method for identifying a logical channel in a radio frame part which may comprise information of one or more logical channels, channel decoding of the information being possible by means of channel decoding methods relating to the different logical channels, the frame part comprising a logical channel indicator, preferably a bit map, **characterized** in that the method comprises the steps of

reading the logical channel indicator from the information the received frame part comprises;

10 arranging selected channel decoding methods into the order in which they will be applied, the first channel decoding method selected being a channel decoding method relating to the logical channel indicated by said indicator;

15 channel decoding the information said frame part comprises in said selected order by applying the selected channel decoding methods until the channel decoding succeeds or all the selected channel decoding methods have been checked;

20 interpreting, in response to a channel decoding that succeeds when a selected channel decoding method is applied, said frame part to comprise information of the logical channel relating to the successful channel decoding method;

interpreting, in response to a channel decoding that fails when any one of the selected channel decoding methods is applied, said frame part to comprise information of a logical channel selected as the default value.

25 2. A method for ensuring that stealing is detected in a time slot or a time slot part, the time slot comprising a training sequence that indicates stealing, the method comprising

reading of said training sequence from the received time slot, **characterized** in that the method comprises the steps of

30 channel decoding, in response to stealing being indicated by said training sequence, a first time slot block by applying a channel decoding method relating to stealing;

35 channel decoding, in response to the channel decoding of said first block failing when the channel decoding method relating to stealing is applied, a second time slot block by applying a channel decoding method relating to stealing;

interpreting, in response to the channel decoding of both the first and the second block failing when the channel decoding method relating to stealing is applied, the time slot to comprise traffic channel data.

3. A method according to claim 2, **characterized** by  
5 arranging, in response to the channel decoding of both the first and the second block failing when the channel decoding method relating to stealing is applied, a training sequence indicating a traffic channel as the training sequence.

*a*  
10 4. A method according to claim 2 or 3, **characterized** by  
interpreting, in response to the channel decoding of the latter time slot block succeeding when the channel decoding method relating to stealing is applied, said time slot as a whole to comprise control channel data.

15 5. A receiver (420) functioning in a radio system, the receiver comprising a unit (46) performing channel decoding, the unit identifying one or more logical channels, and the unit comprising the methods relating to logical channels for channel decoding of the information that received radio frame parts comprise, the radio frame parts comprising a logical channel indicator, preferably a bit map, **characterized** in that said unit (46) is arranged to  
read the logical channel indicator from the information a received  
20 frame part comprises;

arrange selected channel decoding methods into the order in which they will be applied, the first channel decoding method selected being a channel decoding method relating to a logical channel indicated by said indicator;

25 channel decode the information said frame part comprises in said selected order by applying the selected channel decoding methods until the channel decoding succeeds or all the selected channel decoding methods have been checked;

30 interpret, in response to a channel decoding that succeeds when a selected channel decoding method is applied, said frame part to comprise information of a logical channel relating to the successful channel decoding method;

35 interpret, in response to a channel decoding that fails when any one of the selected channel decoding methods is applied, said frame part to comprise information of a logical channel selected as the default value.

6. A receiver (420) functioning in a radio system, the receiver

comprising a unit (46) performing channel decoding, the unit being arranged to read from a received time slot a training sequence indicating stealing, **characterized** in that said unit (46) is arranged to

5 channel decode, in response to stealing being indicated by said training sequence, a first time slot block by applying a channel decoding method relating to stealing;

channel decode, in response to the channel decoding of said first block failing when the channel decoding method relating to stealing is applied, a second time slot block by applying the channel decoding method relating to 10 stealing;

interpret, in response to the channel decoding of both the first and the second block failing when the channel decoding method relating to stealing is applied, the time slot to comprise traffic channel data.

7. A receiver according to claim 6, **characterized** in that 15 said unit (46) is arranged to change, in response to the channel decoding of both the first and the second block failing when the channel decoding method relating to stealing is applied, a training sequence indicating a traffic channel as the training sequence.

8. A receiver according to claim 6 or 7, **characterized** in that 20 said unit is arranged to interpret, in response to the channel decoding of the latter time slot block succeeding when the channel decoding method relating to stealing is applied, said time slot as a whole to comprise control channel data.

9. A receiver according to ~~any one of~~ claims 5 to 8, 25 **characterized** in that the receiver is part of a base station of a mobile communications system.

10. A receiver according to ~~any one of~~ claims 5 to 8, **characterized** in that the receiver is part of a subscriber terminal of a mobile communications system.

11. A channel decoding unit (46) to be connected to a receiver (420) in a radio system, the unit being capable of identifying one or more logical channels and the unit comprising the methods relating to logical channels for the channel decoding of the information that received radio frame parts comprise, the radio frame parts comprising a logical channel indicator, 30 preferably a bit map, characterized in that said unit (46) is arranged to 35

read the logical channel indicator from the information a received frame part comprises;

5 arrange selected channel decoding methods into the order in which they will be applied, the first channel decoding method selected being a channel decoding method relating to a logical channel indicated by said indicator;

10 channel decode the information said frame part comprises in said selected order by applying the selected channel decoding methods until the channel decoding succeeds or all the selected channel decoding methods have been checked;

15 interpret, in response to a channel decoding that succeeds when a selected channel decoding method is applied, said frame part to comprise information of a logical channel relating to the successful channel decoding method;

20 12. interpret, in response to a channel decoding that fails when any one of the selected channel decoding methods is applied, said frame part to comprise information of a logical channel selected as the default value.

25 13. A channel decoding unit (46) to be connected to a receiver (420) in a radio system, the unit being arranged to read from a received time slot a training sequence indicating stealing, **characterized** in that the unit is arranged to

channel decode, in response to stealing being indicated by said training sequence, a first time slot block by applying a channel decoding method relating to stealing;

25 channel decode, in response to the channel decoding of said first block failing when the channel decoding method relating to stealing is applied, a second time slot block by applying the channel decoding method relating to stealing;

30 interpret, in response to the channel decoding relating to both the first and the second block failing when the channel decoding method relating to stealing is applied, the time slot to comprise traffic channel data.

35 13. A unit according to claim 12, **characterized** in that said unit is arranged to change, in response to the channel decoding of both the first and the second block failing when the channel decoding method relating to stealing is applied, a training sequence indicating a traffic channel as the training sequence.

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a 14. A unit according to any one of claims 11 to 12,  
characterized in that the unit is arranged to interpret, in response to a  
channel decoding of the latter time slot block succeeding when the channel  
decoding method relating to stealing is applied, said time slot as a whole to  
5 comprise control channel data.

a 15. A unit according to any one of claims 11 to 14,  
characterized in that the unit is part of a base station of a mobile  
communications system.

a 16. A unit according to any one of claims 11 to 14,  
10 characterized in that the unit is part of a subscriber terminal of a  
mobile communications system.

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